

Message Text

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ACTION OES-06

INFO OCT-01 ARA-06 EUR-12 IO-13 ISO-00 AID-05 CEA-01
CIAE-00 COME-00 DODE-00 EB-08 FEAE-00 FPC-01 H-01
INR-07 INT-05 L-03 NSAE-00 NSC-05 OMB-01 PM-04
USIA-06 SP-02 SS-15 STR-04 TRSE-00 ACDA-07 NRC-05
/118 W

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R 171445Z MAR 77
FM USMISSION IAEA VIENNA
TO SECSTATE WASHDC 8814
INFO AMEMBASSY BRASILIA
AMEMBASSY BONN
AMEMBASSY BUENOS AIRES
AMEMBASSY THE HAGUE
AMEMBASSY LONDON
USMISSION EC BRUSSELS
AMCONSUL RIO DE JANEIRO
AMCONSUL SAO PAULO
USERDA HQ WASHDC
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LIMITED OFFICIAL USE SECTION 1 OF 2 IAEA VIENNA 2095

DEPT PASS IO/SCT

E.O. 11652: N/A
TAGS: TECH, ENRG, PARM, IAEA, GW, BR
SUBJECT: IAEA OFFICIAL COMMENTS ON BRAZIL'S NUCLEAR PROGRAM

REF: BRASILIA 1227

1. IN RESPONSE MISSION'S INQUIRY RE BRAZILIAN PRESS
REPORTS OF RADIO INTERVIEW OF IAEA DEPUTY DIRECTOR
GENERAL FOR SAFEGUARDS (FORMER TITLE INSPECTOR GENERAL)
ROMETSCH, HE HAS PROVIDED MISSION TRANSCRIPT OF INTERVIEW
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BROADCAST BY "SENDER FREIES BERLIN" FEBRUARY 12, 1977,
TITLED (TRANSLATION) " THE GERMAN-BRAZILIAN ATOMIC
ENERGY DEAL AND INTERNATIONAL SAFEGUARDS."

2. MISSION TRANSLATION OF PERTINENT PORTIONS OF TRANSCRIPT
FOLLOWS:

QUESTION: . . . IN BONN ONE SAYS, ALL THAT WE DELIVER SUCH AS MATERIAL OR KNOW-HOW, REMAINS UNDER SAFEGUARDS OF THE IAEA, INCLUDING WHAT IS BUILT 20 YEARS AFTER THE ACTUAL OPERATION OF THE NUCLEAR POWER PLANTS, UNDER A REPLICATION PRESUMPTION. BUT THE BRAZILIANS HAVE NOT AGREED THAT ALL NUCLEAR ACTIVITY IN THE COUNTRY CAN BE SAFEGUARDED BY YOU. OTHERWISE THEY COULD HAVE SIGNED THE NON-PROLIFERATION TREATY.

ANSWER: OF COURSE, THIS IS THE MISSING POINT -- THE FUNDAMENTAL OBLIGATION TO NEVER UNDERTAKE ANYTHING OUTSIDE OF THESE SAFEGUARDED NUCLEAR ACTIVITIES. THE BRAZILIANS WANT TO LEAVE THIS POSSIBILITY OPEN AND THIS IS THE REASON WHY THEY HAVE NOT SIGNED THE NON-PROLIFERATION TREATY. NEVERTHELESS, FOR THE MOMENT, WHAT HAPPENS WITH REGARD TO NUCLEAR ACTIVITY IN BRAZIL AT PRESENT, HAPPENS ON THE BASIS OF IMPORTED MATERIALS AND FACILITIES AND IS THEREFORE UNDER OUR SAFEGUARDS. PRACTICALLY EVERYTHING. THEORETICALLY -- (BUT) WHAT DO I KNOW WHAT WILL HAPPEN IN THE NEXT TEN YEARS.?

QUESTION: FOR MILITARY USE ONE NEEDS EITHER PLUTONIUM OR HIGH-ENRICHED URANIUM. THIS, HOWEVER, IS FOUND IN THE FUEL PROCESSING ONLY ON VERY DEFINITE, ONE COULD SAY STRATEGIC POINTS, WHERE YOU -- I ASSUME -- SAFEGUARD ESPECIALLY. IN THE LIGHT-WATER-REACTOR -- IN THE COMMON TYPE, AS WE SAY, IS THE MATERIAL ACTUALLY THE SAFEST? LIMITED OFFICIAL USE

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ANSWER: AS LONG AS IT IS IN THE REACTOR IT IS VERY SAFE, BECAUSE IT IS ENCLOSED INTO A PRESSURE VESSEL WHICH CAN ALSO BE SEALED. AND AS LONG AS IT IS STILL IN THE SPENT FUEL ELEMENTS, WHICH ARE TAKEN OUT OF THE REACTOR, IT IS ALSO QUITE SAFE, BECAUSE IT NEEDS -- WHEN ONE WANTS PURE PLUTONIUM, WHICH CAN BE USED AS A BASIS FOR A NUCLEAR EXPLOSIVE -- A PRETTY COMPLICATED TECHNIQUE, THE REPROCESSING OF FUEL ELEMENTS AND THE CHEMICAL SEPARATION OF THE FISSIONABLE PRODUCTS OF URANIUM AND PLUTONIUM.

QUESTION: WITH THIS REPROCESSING PLANT WE ARE ALREADY A STEP FURTHER. IT IS THE CRITICAL POINT, MORE CRITICAL EVEN -- IF WE START WITH THE BEGINNING OF THE CYCLE -- THAN THE ENRICHMENT PLANT. HERE ONE CAN PRODUCE WITH THE SAME PROCESS AS FOR FUEL, 3.5 PERCENT ENRICHED URANIUM, 90 PERCENT ENRICHED URANIUM AS WELL.

ANSWER: THEN IT BECOMES JUST AS DANGEROUS.

QUESTION: YES, BUT IT TAKES TIME. HOW LONG? AND
THIS YOU CAN RELATIVELY EASILY SAFEGUARD?

ANSWER: THIS DEPENDS UPON THE TECHNICAL NATURE, THE
TYPE OF ENRICHMENT PLANT. THERE ARE ENRICHMENT PLANTS
WHICH CAN BE RELATIVELY EASILY CHANGED FROM A LOW TO
A HIGH ENRICHMENT PLANT. THESE ARE FOR EXAMPLE
CENTRIFUGAL PLANTS. BUT THE
PLANT WHICH IS PLANNED FOR BRAZIL IS BASED ON THE
JET NOZZLE PROCESS AND IS NOT EASILY CHANGEABLE TO A
HIGHER ENRICHMENT. ONE HAS ONLY A LIMITED NUMBER OF
STAGES AND WOULD HAVE TO -- IN ORDER TO REACH A HIGH
ENRICHMENT -- FEED BACK ALL THE MATERIAL REPEATEDLY,
AS WE SAY RECYCLE, AND THIS IS A VERY LONG PROCESS
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WHICH CAN EASILY BE SPOTTED DURING OUR SAFEGUARDS.

QUESTION: BECAUSE THERE ARE IN THIS FUEL PROCESSING
CYCLE STRATEGIC POINTS, WHERE THE SAME MATERIAL CAN
BE USED FOR PEACEFUL AS WELL AS MILITARY PURPOSES --
I THINK OF MORE OR LESS PURE PLUTONIUM -- THERE
WILL IT ALSO BE CRITICAL FOR SAFEGUARDS?

ANSWER: YES, THESE ARE THE CRITICAL POINTS. LET'S
SAY: LOW ENRICHED URANIUM IN THE FORM OF A FUEL
ELEMENT CANNOT SO EASILY BE USED IN ORDER TO MAKE
NUCLEAR EXPLOSIVES. BUT AT THE POINT, WHEN WE GET
PURE PLUTONIUM FOR THE FIRST TIME IN THE REPROCESSING
PLANT, IT COULD BE USED IN THIS FORM FOR THE PRODUCTION
OF EXPLOSIVES. THEREFORE WE HAVE TO SAFEGUARD VERY

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INTENSIVELY AT THIS POINT.

QUESTION: DR. ROMETSCH, MAYBE IT IS VERY LAYMAN-LIKE,
BUT THERE IS ALSO A VERY CLEAR AND EVIDENT CONCEPTION,
THAT WITH THE PURE NUMERICAL INCREASE IN REPROCESSING
PLANTS AND ENRICHMENT PLANTS IN VARIOUS PARTS OF THE
WORLD, THE RISK THAT SOMETHING WILL BE OVERLOOKED BY
YOUR SAFEGUARDS, SO TO SPEAK, WILL BECOME GREATER.
AND THERE IS ALSO THE POLITICAL SIDE; I BELIEVE A
PROPOSAL FROM HENRY KISSINGER WAS MADE THAT REGIONAL
FUEL CYCLE CENTERS, I.E., ENRICHMENT PLANTS, REPRO-
CESSING PLANTS AND WASTE REPOSITORIES, NOT TO BE
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FORGOTTEN, SHOULD EXIST ONLY AT CERTAIN LOCATIONS.
DO YOU FIND THIS SENSIBLE?

ANSWER: YES, OF COURSE; AT LEAST IT SIMPLIFIES
OUR WORK IN SAFEGUARDS. IT CONCENTRATES THESE PLANTS
AT CERTAIN LOCATIONS. FOR EXAMPLE, REPROCESSING
PLANTS, WHICH WE SAID ARE A STRATEGIC IMPORTANT POINT
IN THE FUEL CYCLE, ONE NEEDS, WHEN ONE MAKES THEM IN
LARGE SIZES, WHICH IS ALSO MORE ECONOMIC, MAYBE ONE
PLANT FOR 50 REACTORS. INSTEAD OF HAVING A LOT OF
SMALL ONES, AS FOR INSTANCE THE PLANT AT KARLSRUHE,
THE CONCLUSION WAS REACHED THAT ONE SHOULD BUILD BIG
PLANTS (AS IS FORESEEN IN THE FRG, PLANNED BY KEWA)
AND THIS BIG PLANT IS THEN ABLE TO SERVE ABOUT 50 BIG
REACTORS.

QUESTION: ...YOU SAID SOME TIME AGO THAT...EIGHT DAYS OF INSPECTION PER YEAR ARE SUFFICIENT FOR LIGHT WATER REACTORS.

ANSWER: YES, IT WILL LIE BETWEEN EIGHT AND TWELVE DAYS.

QUESTION: AND HOW DOES THIS COMPARE WITH A REPROCESS-ING PLANT?

ANSWER: THERE, WE WOULD PRACTICALLY HAVE TO BE IN IT PERMANENTLY.

QUESTION: WHAT DOES THE MAN HAVE TO DO IN THAT CASE?

ANSWER: IN SUCH A PLANT WE HAVE TO MAKE A BALANCE OF MATERIAL. AT THE INPUT OF THIS PLANT IS THE POINT WHERE WE CAN FOR THE FIRST TIME EFFECTIVELY DETERMINE, THROUGH ANALYSIS, HOW MUCH PLUTONIUM HAS BEEN PRODUCED IN THE REACTOR. AND AT THE END OF THIS PLANT LIMITED OFFICIAL USE

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THIS PLUTONIUM COMES OUT IN A FORM SUCH THAT IT COULD BE USED DIRECTLY FOR EXPLOSIVES.

QUESTION: SO THE TIME FOR ALARM WILL BE A SHORT ONE?

ANSWER: AT THE END OF THE PLANT THE TIME FOR ALARM IS VERY SHORT. AT THE INPUT OF THIS PLANT WE HAVE TO KNOW WHAT THERE IS AND WE HAVE TO MAKE A BALANCE OF MATERIAL BETWEEN WHAT GOES INTO THE PLANT, AND WHAT COMES OUT, IN ORDER TO DETERMINE THAT NOTHING HAS BEEN DIVERTED.

QUESTION: THEN 75 INSPECTORS WILL THEREFORE NOT BE ENOUGH ANY MORE?

ANSWER: NO, THEN WE NEED MORE. FOR A BIG REPROCESS-ING PLANT, I WOULD ESTIMATE THAT WE NEED A TOTAL OF THEN INSPECTORS.

3. BEGIN LIMITED OFFICIAL USE. MISSION BELIEVES ROMETSCH'S ACTUAL STATEMENTS ARE STRAIGHTFORWARD AND NEED NO FURTHER PUBLIC CLARIFICATION. ANY FURTHER STATEMENTS WOULD DOUBTLESS ALSO BE SELECTIVELY PARAPHRASED BY BRAZILIAN PRESS. END LIMITED OFFICIAL USE. STONE

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